## ABSTRACT

A data structure for implementing a traffic engineering function in a multiprotocol label switching system comprises: a subscriber profile including a plurality of entries for storing forwarding equivalence class (FEC) information required for setup of a label switched path (LSP) based on the traffic engineering function, the entries of the subscriber profile being sequentially assigned indexes corresponding to one traffic engineering service subscriber identification (ID); a path profile including a plurality of entries for storing respective path information items regarding a type length value (TLV) of a signal protocol required for setup of an explicit routed label switched path (ER-LSP) based on the traffic engineering function, the entries of the path profile being sequentially assigned indexes corresponding to respective path information items; and a quality of service (QoS) profile including a plurality of entries for storing respective QoS information items regarding a TLV of a signal protocol required for setup of a constraint routed label switched path (CR-LSP) based on the traffic engineering function, the entries of the QoS profile being sequentially assigned indexes corresponding to respective QoS information items. The indexes assigned to the profile entries include a plurality of indexes set by an operator for interlinking corresponding ones of the subscriber profile entries, the path profile entries, and the QoS profile entries.